



Patent Information: [malema.com/patents](http://malema.com/patents)

## Key Features

- **~85% reduction in peak to peak flow pulsation**
- **Wetted fluid path made of Polyurethane and PEEK that meets USP Class VI, USP 661.2, and USP 788 requirements**
- **Patent-pending single-use design eliminates pulsation in flow rate and line pressure**
- **Gamma-stable to 50 kGy**
- **Available for line sizes from 1/16" to 1" ID, and with hose barb or tri-clamp fluid connections**
- **Pressure rating to 90 psi (6 bar)**

# DMP-7000 Single-Use Pulsation Dampener

## Description

The DMP-7000 pulsation dampener is designed for single-use applications in the life sciences industries.

Positive displacement pumps, such as diaphragm and peristaltic pumps, produce pulsations in the fluid. These pulsations can negatively impact single-use pharmaceutical production processes such as TFF and chromatography, which need tightly controlled flow rates and line pressures. Malema's single-use dampeners reduce pulsation and variations in flow of critical biopharmaceutical media in processing and transfer applications.

DMP-7000 dampeners are manufactured with all-plastic wetted surfaces that meet USP Class VI, USP 661.2, and USP 788 requirements. The molded design reduces shear and improves surface smoothness. They are gamma-stable to 50 kGy.

## Applications

- Filling and Fluid Transfer
- Chromatography
- Tangential Flow Filtration
- Depth Filtration

### Principal of Operation

Fluid enters the DMP-7000 pulsation dampener downstream of the positive displacement pump. Inside the dampener, a series of flexible polyurethane membraned chambers absorb the pulsation caused by the pump and stabilizes the downstream flow rate.

### Flow Output Traces

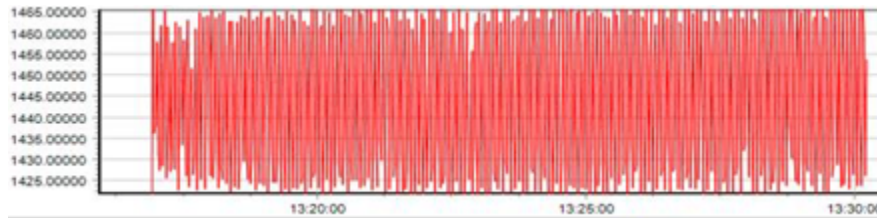


Figure 1. 1/4" ID fluid path with water, pumped using industry-standard diaphragm pump without dampener. The difference between min and max flow is approx. 40 g/min at 1445 g/min nominal flow rate

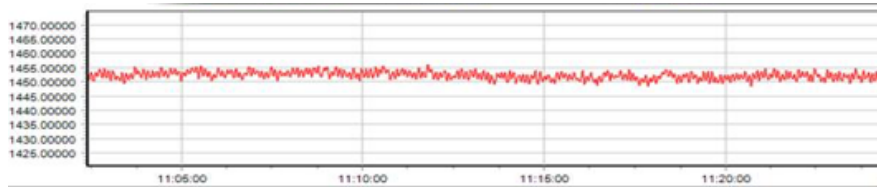
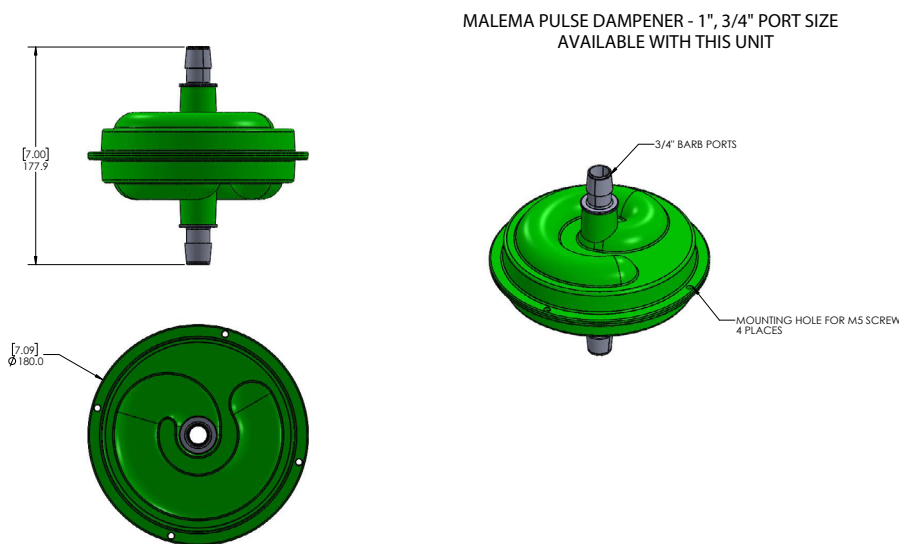


Figure 2. The same 1/4" ID fluid path with water, pumped the same industry-standard diaphragm pump with DMP-7000 installed between pump and flow meter. The difference between min and max flow is approx. 5 g/min at 1453 g/min nominal flow rate

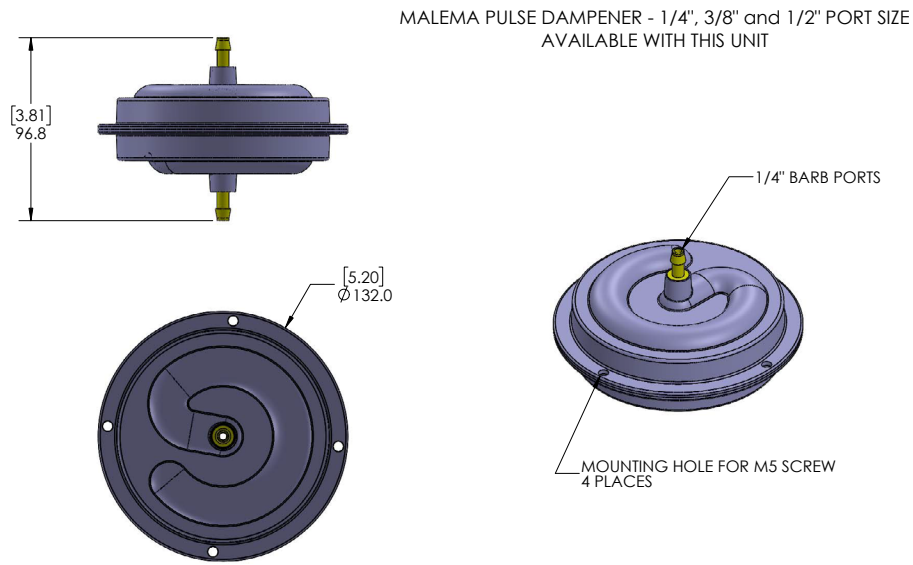
### Dimensional Drawings

FOR REFERENCE ONLY

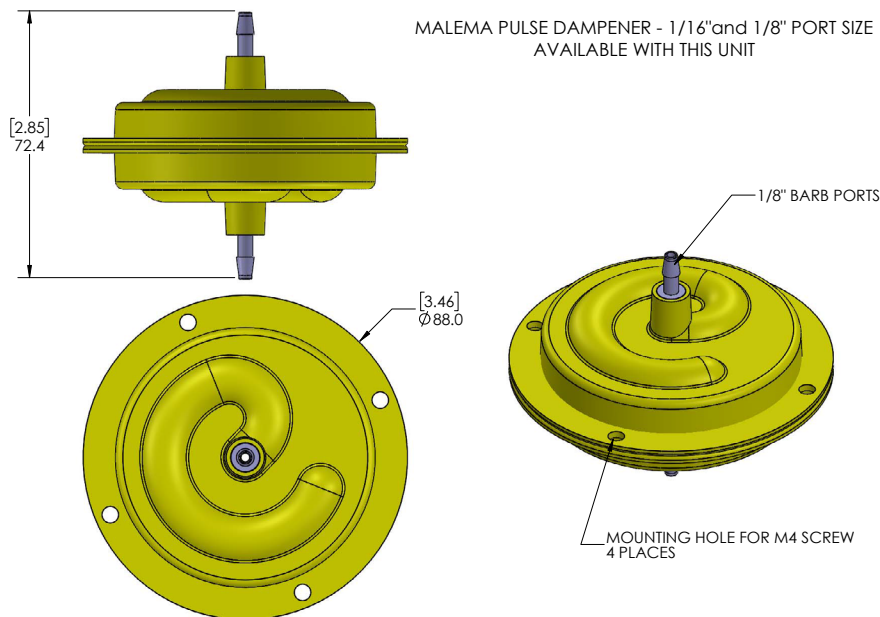


**DMP-7000**  
**Dimensional Drawings**  
**FOR REFERENCE ONLY**

**Single-Use Pulsation Dampener**

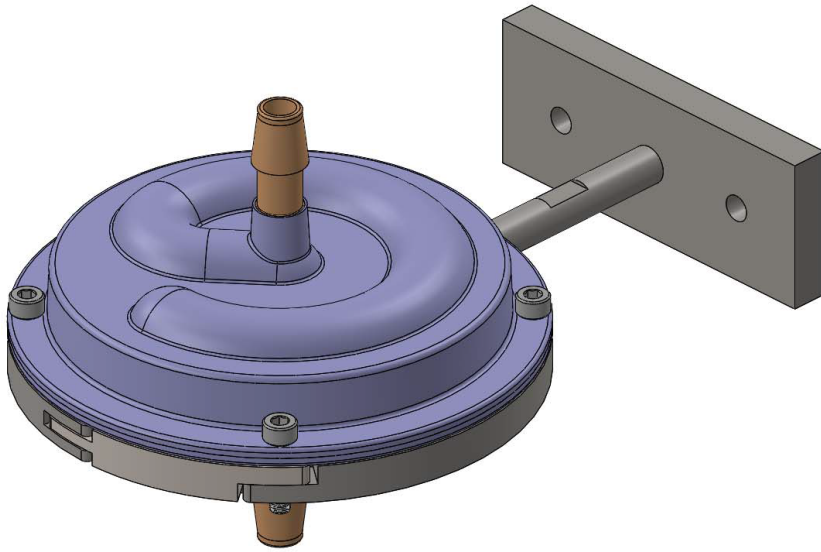


**Dimensional Drawings**  
**1/8" and 1/16" sizes available Q1 2021**  
**FOR REFERENCE ONLY**

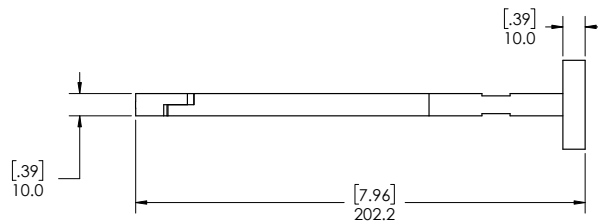
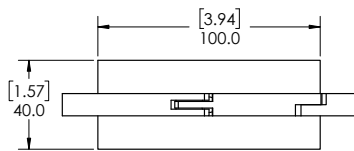
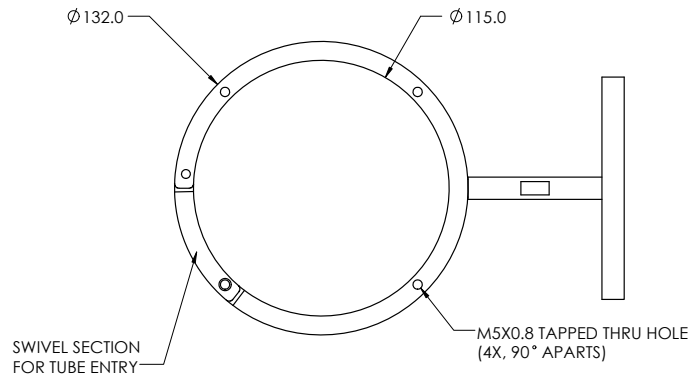
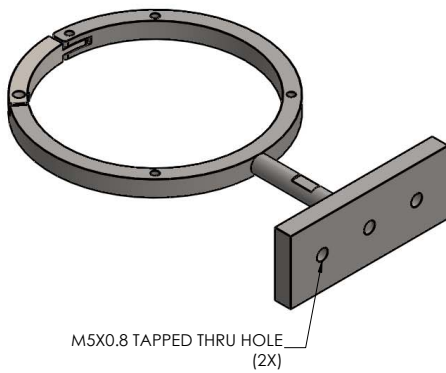


**Dampener Holder**

Malema provides stainless-steel dampener holders to securely mount the dampener in place. Please see the example below for 1/4", 3/8" and 1/2" sizes.



THIS HOLDER CAN BE USED FOR 1/4", 3/8" AND 1/2" DAMPENERS



DIMS ARE IN MM [IN]

# DMP-7000

## Ordering Information

# Single-Use Pulsation Dampener

Model Ordering Code for Dampener						Description	
DMP-7000	-	**	*	*	-	***	Single-use Fluid Dampener
	-						
Size (ID)	01						1/16" *
	02						1/8" *
	04						1/4"
	06						3/8"
	08						1/2"
	12						3/4"
	16						1"
Fluid Connection	H						Hose Barb
	T						Tri-Clamp (Mini TC for fractional sizes)
Sterilization	0						No Sterilization
	1						Gamma Irradiated to 50 kGy MOQ of 50 pieces
Unique Identifier					-	XXX	Assigned by Factory

\* Available Q1 2021

Model Ordering Code for Holder						Description	
DMP-HOLDER-7000	-	**	-			***	Durable Dampener Holder
	-						
Size	02						1/16" - 1/8"*
	08						1/4" - 1/2"
	16						3/4" - 1"
Unique Identifier					-	XXX	Assigned by Factory

\* Available Q1 2021

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